

1 INTRODUCTION

Seigniorage, the government's revenue from money creation, has been a source of finance for countries from the past to the present. The article focuses on the future of it as a new EU tax to finance the budget of the Union.

2 SEIGNIORAGE

The European Union wants true new own resources. From a list of six taxes in 2010, the Commission selected in 2011: a financial transaction tax (FTT) and an EU VAT. Seigniorage, though once seen as a promising candidate and being able to furnish the European budget in full has fallen out of grace. It has become a footnote to the EU's latest proposal.

The word seigniorage sounds outlandish but the phenomenon that goes behind it is as real as it ever was. In the Middle Ages, seigniorage was a prerogative of the Crown. The seigneur claimed a percentage upon the bullion brought to the mint to be coined or to be exchanged for coin.¹ Seigniorage became such a lucrative source of income that seigneurs often mandated yearly recoinage. In England, after the year 1000 over a period of 150 years, rulers changed their coinage at least 53 times.² Seigniorage is also a type of revenue governments earn because of their monopoly power over currency production.

Nowadays, the returns from currency issue are three-fold. First, it is the difference between the face value of a coin or banknote and its production costs. The difference between the face value of paper money and its marginal printing cost are almost equal to the face value of the note.³ The cost of printing banknotes in the US is

estimated to be about four cents for a newly printed banknote.⁴

Second, it consists of the returns on the investments of the balances commercial banks have to hold at their National Central Banks (NCBs) as a counterpart to the total amount of banknotes in circulation. In the euro zone, in 2011, the total value of the banknotes in circulation was about EUR 890 billion.⁵

Third, it is the economic disadvantage suffered by a holder of cash, due to the effects of expansionary monetary policy. In the long run, inflation is mainly the result of the issue of money above the amount necessary to finance the growth in trade. Essentially, inflation is an indirect income tax, since it causes a decline in the purchasing power of the public's income.

Because of the just-said, there are three measures of seigniorage.⁶ First, the change in the monetary base: the currency and central bank deposits that together provide the base for the money supply. Second, the proceeds earned by the NCBs of investing resources obtained by the past issuance of money in interest-bearing assets. Third, the pertaining rate of inflation.⁷ Since we are interested in the fiscal aspect of seigniorage, we mainly look at the second measure of seigniorage.⁸ At present, the proceeds flow to the NCBs of the Member States and the European Central Bank (ECB) of the Eurosystem. In the end, the proceeds go to the governments of the euro-zone countries.⁹

All over the world, the average reliance of governments on seigniorage, measured as the ratio of

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¹ S.W. Black, *Seigniorage*, *New Palgrave dictionary of money and finance* (Macmillan 1992).

² C. Desan, *Coin Reconsidered: The Political Alchemy of Commodity Money*, 11(1) *Theoretical Inquiries in Law* (11)1 361–408 (2011).

³ W.H. Buiter, *Seigniorage*, *Centre for Economic Performance*, Discussion Paper 786 (London School of Economics and Political Science 2007).

⁴ R.J. Barro & B. Stevenson, *Do You Want that in Paper or Metal?*, *Wall Street Journal*, Commentary, 1, Nov. 6 (1997); Whatever the denomination, the Federal Reserve paid in 2005, 5.7% for each note for printing and delivering to the Bureau of Engraving and Printing (C. Karmin, *Biography of the Dollar* (Crown Business 2008)).

⁵ The Member States are still in charge, and do get the seigniorage, of the production of euro coins.

⁶ A. Drazan, *A General Measure of Inflation Tax Revenues*, 17 *Econ. Letters* 327–330 (1985).

⁷ Buiter, *supra* n. 3.

⁸ F. Schobert, *Seigniorage: An argument for a national currency?*, Working Document 174, Center European Policy Stud. (2001).

⁹ It is, however, an open question how much and when the seigniorage revenues are distributed from the NCBs to the national governments (A. Ize, *Spending Seigniorage: Do central banks have a governance problem?*, IMF Staff Papers 54(3) (2007)).

seigniorage revenue to governmental expenditures, varied for the period 1965–1994 from a minimum of 1% to a maximum of 31%.¹⁰ In Europe, it was on average a little above 5% in the sixties and seventies of the last century.¹¹ In Western Europe, as a percent of Gross Domestic Product (GDP), it was about 0.5% for the period 1971–1990.¹²

In recent decades, seigniorage has always been mentioned as a new own resource for the Union.¹³ Rather than taxes with a national dimension, in the famous Sapir rapport,¹⁴ seigniorage was an example of a tax with a clear EU dimension: taxes that are either related to an EU policy so they cannot be meaningfully be reapportioned nationally or to have a mobile tax base within the EU. On principle, they should directly accrue to the Union. It was estimated that even a part of it could furnish the financing needs of the Union. In recent studies, however, seigniorage has disappeared as an option for an EU tax. The reasons are that not all Member States do participate in the euro zone, the revenues should be small and volatile, and institutional opposition from especially the ECB.¹⁵

3 ASSESSMENT

3.1. On the Positive Site

Several characteristics of seigniorage do make it a candidate for a EU tax. First, the fundamental reason for assigning seigniorage to the Union is that it is linked to a unique key European policy. In the history of the EU, the introduction of the euro in 2002 is a new common EU policy *on par* with the introduction of the Common Agricultural Policy and the one internal market. The revenue the euro zone raises by printing money is not simply the result of adding-up the revenues the Member States generated before with their currencies. Most

currencies did not have the status of an international reserve currency. In other words, in an integrated currency area there is no obvious key for apportioning seigniorage to Member States. Just as the custom duties collected at EU ports do not belong to the Member States in which the ports are situated. It is a common good of the Member States taking part in the Union.¹⁶

Second, seigniorage revenues are considerable. It flows from the income derived by the NCBs and the ECB from certain earmarked assets held against notes in circulation and deposit liabilities to credit institutions.¹⁷ In 2001 for the Eurosystem, seigniorage was estimated to be about EUR 10 billion.¹⁸ At present, an estimate of just the yearly change in the stock of money in the Eurosystem is about EUR 50 billion. For Willem Buiter this is essentially free money for the Union.¹⁹ Begg *et al.* estimate seigniorage could provide between 4% and 40% of the annual EU budget.²⁰ In the short run, however, seigniorage revenues can be volatile. They depend on the demand for cash balances and prevailing interest rates; both are notably affected by the business cycle.²¹ Over time, the revenues are about 0.25% of GNP.²² In the future, however, changes in payments habits and the generalized use of electronic means of payments, the rising cashless society, might erode the tax base.²³ On the other hand, the development of the euro

¹⁰ H.J. Haslag & J. Bhattacharya, *Central bank responsibility, seigniorage, and welfare*, Research Department Working Paper 9909, Federal Reserve Bank of Dallas (1999).

¹¹ M. Klein & M.J.M. Neumann, *Seigniorage: What is it and Who Gets It?*, 126(2) *Rev. World Econ.* 205–221 (1990).

¹² R.W. Click, *Seigniorage in a Cross-Section of Countries*, 30(2) *J. Money, Credit & Banking* 154–171 (1998); D. Gros, *Seigniorage and EMU. The Fiscal Implications of price Stability and Financial Market Integration*, 9(4) *European J. Pol. Econ.* 581–601 (1993).

¹³ I. Begg, H. Enderlein, J. Le Cacheux & M. Mrak, *Financing the European Budget*, European Commission, Directorate General for Budget, Brussels (2008); P. Cattoir, *Tax-based EU own resources: An assessment*, European Commission, Working Paper 1 (2004); European Commission, *Financing the European Union. Commission report on the operation of the own resource*, Brussels (1998); European Commission, *Commission report on the operation of the own resource system*, 505 final, Brussels (2004); European Parliament, *Die Eigenmittel der Europäischen Union: Analysen und Entwicklungsmöglichkeiten*, Generaldirection Wissenschaft, Luxemburg (1997).

¹⁴ A. Sapir, *An agenda for a growing Europe*, Rapport of an Independent High level study group, European Commission, Brussels (2003).

¹⁵ European Commission *Financing the EU budget: Report on the operation of the own resources system*, Annex. Commission Staff Working Paper, SEC 876 final, Brussels (2011).

¹⁶ Cattoir, *supra*, (2004); J.D. Hansen & R.M. King, *How to Cut the Seigniorage Cake into Fair Shares in an Enlarged EMU*, 45(5) *J. Common Mkt. Stud.* 999–1010 (2007); S. Stojanović, *Revenue Sources for Financing the European Union Budget*, 3(1) *Megatrend Rev.* 21–44 (2006).

¹⁷ Consolidated Treaty, Protocol No. 4, Art. 32. For the list of earmarked assets, including, e.g., gold, see ECB/2010/23: Annex II. For the actual distribution of assets see J. Kun, *Seigniorage in Selected Acceding Countries: Current Situation and Future Prospects on the Road towards Monetary Integration*, *Oesterreichische National Bank*, 2 Focus on Transition 176–193 (2003).

¹⁸ Cattoir, *supra*, (2004). Total central bank profits were about EUR 25 billion. Next to seigniorage, central banks generate profits and losses based on monetary policy operations, foreign exchange operations, advisory activities, economic research and the proceeds of investments in real estate. Especially central banks with private shareholders undertake these last activities to lure private shareholders (G. Rösl, *Seigniorage in der EWU, Eine Analyse der Notenbankgewinnentstehung und -verwendung des Eurosystems* (Peter Lang 2002)).

¹⁹ W.H. Buiter, *Global Economic Outlook and Strategy*, Citigroup Global Markets, July 21 (2010).

²⁰ Begg *et al.*, *supra* n. 13.

²¹ At this moment, for instance, the interest rate of the Eurosystem's main refinancing operations (the so-called refi rate), the rate the ECB gets as the proceeds of its allotted quantity of euro notes, is about 1%. From a historical perspective, this is exceptionally low. It is related to the policy to stimulate the economy after the global financial crisis. For instance, from 2007 until 2009 the refi rate was 4%. For an estimate of seigniorage in several Eastern Europe EU Member States see E. Hochreiter & R. Rovelli, *The generation and distribution of central bank seigniorage in the Czech Republic, Hungary and Poland* (2002), <http://www2.dse.unibo.it/rovelli/RR-Papers/EHRR-Seig>; and Kun, *supra* 17. In general, it is above the seigniorage in the euro zone, *supra* n. 17.

²² R. Heinemann, P. Mohl & S. Osterloh, *Reform options for the EU own resource System* (Physica-Verlag 2008).

²³ O. Vergote, W. Studener, L. Efthymiadis & N. Merriman, *Main drivers of the ECB financial accounts and ECB financial strengths over the first 11 years*, European Central Bank, Occasional Paper Series 111 (2010).

as an international currency may contribute to seigniorage through increased circulation of euro notes outside the euro area. In the case of the US, about half of the dollar bills are used outside the US²⁴

In sum, it seems safe to estimate the revenues from seigniorage to be, on average, a quarter of the total GNP of the Union, that is, about a quarter of the EU budget.²⁵ At this moment, however, the amount of seigniorage as generated by the euro is not at its maximum. This, since only 17 of the 27 Member States participate in the eurozone, *Mutatis mutandis*, it could grow to about a third of the budget.²⁶

Third, an advantage of seigniorage, none of the other proposed EU taxes can match, are its low collection costs and possibilities for fraud. The tax-collection points are limited to the NCBs that use the euro and the ECB.²⁷ Fraud should be non-existent due to the transparency of Central Banks activities.

3.1 On the Negative Site

Given the present crisis in the euro zone, it goes without saying, that the existence of the euro is an essential precondition for this EU tax.

This being said, seigniorage has other drawbacks. One of the main problems is that the autonomy seems to be threatened of the NCBs and the ECB. Not just monetary but fiscal policy too could become an aim of the ECB: to furnish the Union with monetary income (seigniorage). The monetary goal of the ECB, to maintain price stability, would be in danger. Besides that, for the NCBs seigniorage is a long run reliable income source that helps central banks to maintain their financial independence.²⁸ For these reasons, the ECB and NCBs are opposed to seigniorage as a new EU tax.²⁹

The argument, however, looks like a sophism. We are looking at the monetary income of the ECB to the European Union. We are not discussing the turnaround

that the Union pays to the ECB. When seigniorage goes to the EU, it is not different as it was before the introduction of the euro: the NCBs had to give seigniorage to the central governments and private shareholders. The financial and operational autonomy of the ECB remain the same.³⁰ Besides that, if seigniorage would flow to the Union, the ECB and NCBs still do have other sources of income. Though, of course, the ECB and the NCBs can keep part of seigniorage as handling costs in view of their currency function. Just like Member States retain part of the collected custom duties.

From a legal point of view, a solution has to be found for the different legal structures of the NCBs. In most Member States, the state is the only shareholder of the NCB. In Belgium, Austria and Italy, however, there are only, or next to the state, private shareholders. All shareholders have a claim to the dividend and hence to the seigniorage; they must be compensated. In addition, the statutes of the European Central Bank has to be changed. The statute, Article 33.1 (b), obliges that seigniorage has to be shared with the NCBs.

Finally, the European Union must find a solution for those states that do not, out of principle or yet, use the euro. Member States, save The United Kingdom and Denmark, do have the obligation, when fulfilling the criteria, to adopt the euro. Seigniorage, also, would involve a temporary two-tier mechanism: a different treatment is imposed on euro zone and non euro-zone members.³¹ In the literature, two suggestions are made to handle this problem. A simple solution would be to let the states outside the euro zone pay according to their GNP. The overall ECB seigniorage is deducted from the GNP contributions of the euro-zone members.³²

Goulard and Nava give a more complicated proposal.³³ States not yet participating should pay a share of their GDP, which is calculated by a formula constituted of a linear combination of the share of the ECB seigniorage in the GDP of the euro zone and the share of the country's central banks profits in the country's GDP.³⁴ The weighting of both parts would be a political decision. As the central banks outside the euro zone usually generate higher profits due to higher inflation, a higher waiting of the second part would increase the contributions of those countries.

4 SUMMARY AND CONCLUSION

The introduction of seigniorage as an EU tax is no one-way bet. On the one hand, it can raise about a third of

²⁴ R. Baldwin & C. Wyplosz, *The Economics of European Integration* (McGrawHill 2006).

²⁵ This estimate is in line with an estimate for the seigniorage given by The Bank of Canada (Bank of Canada, 'Seigniorage', *Backgrounders*, May, 2010), <http://www.bankofcanada.ca/en/backgrounders/bg-m3.html>. In Canada, in 2010, for the most commonly used 20-dollar bill, the revenues minus all the costs, is about 95 dollar cents each year. This is a return of about 4%. For the Union this equals about a quarter of the EU budget. The low estimates of the *European Commission*, *supra* n. 15 of the amount of seigniorage are, first, the result of looking at the present situation of exceptional low interest rates (compare n. 21) and, second, not taking into account the seigniorage of those Member States who are not yet a part of the euro zone. Cp. M.J.M. Neumann, *Seigniorage in the United States: How much does the U.S. government make from money production?* Federal Reserve Bank of St. Louis Working Paper. March/April (1992): 29–40.

²⁶ E. Hochreiter & R. Rovelli, *supra* n. 21; B. Lang, *The Value of Seigniorage*, *Currency News*, Vol. 6, 12 December (2008).

²⁷ A legal point to be taken care of is the European Court of Auditors must be able to audit the NCBs and the ECB. An option they do not have at present.

²⁸ Vergote et.al., *supra* n. 23.

²⁹ *European Commission*, *supra* n. 15.

³⁰ Begg et.al., *supra* n. 13.

³¹ *European Commission*, *supra* n.15

³² Heinemann, Mohl & Osterloh, *supra* n. 22, at 107.

³³ S. Goulard, & M. Nava, *Un financement plus démocratique du budget européen: un défi pour la convention européenne*, 80 *Revue Française de Finances Publiques* 31–52 (2002).

³⁴ *Ibid.*, estimate the revenues of seigniorage between 0.2% and 0.3% of the GNP of the Union.

the EU budget. Since it is collected at the level of the ECB and NCBs of the euro area, collection can be done almost costless and fraud-free. Moreover, seigniorage belongs to the Union. It is generated by a unique, policy-driven common EU policy: the European Monetary Union. For this reason, as has been said, it is only a matter of time before the monetary revenues of the Eurosystem are assigned to the EU.³⁵ On the other hand, next to some legal and practical problems, seigniorage faces opposition from the NCBs and ECB.

What can tip the balance in favour of seigniorage compared to an FTT and an EU VAT, the both by the Commission preferred taxes? One of the main obstacles to the introduction of those taxes: the loss of the fiscal

sovereignty of the Member States, is not relevant for seigniorage. In 1992 with the introduction of the European Monetary Union, the Member States gave up their sovereignty on monetary policy.

In short, for a new EU tax it is possible to go back to almost square one of modern monetary history: seigniorage. By its own strength and by default of the proposed EU taxes, seigniorage could become an option. As John Maynard Keynes said: 'A government can live by this means when it can live by no other. It is the form of taxation which the public find hardest to evade and even the weakest government can enforce, when it can enforce nothing else'.³⁶

³⁵ I. Begg & N. Grimwade, *Paying for Europe* (Sheffield Academic Press 1998).

³⁶ J.M. Keynes, *A Tract on Monetary Reform* 37 (Macmillan 1923).